


VISOR® V20 Robotic Advanced, medium field of view

Vision sensor for object detection, presence check, completeness check, measurement and positioning tasks

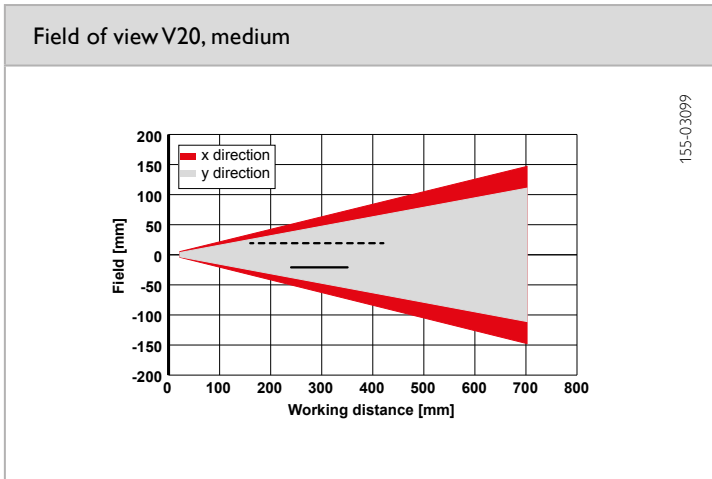
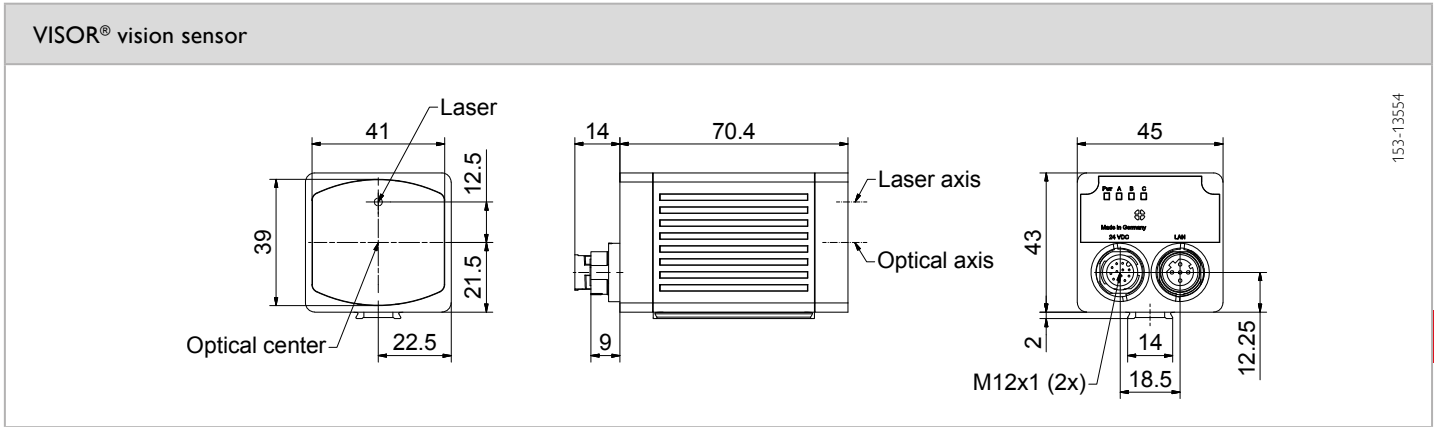


PRODUCT HIGHLIGHTS

- Calibration methods for robotics applications
- Detectors for position determination
- Result offset
- Offset of work plane
- Gripping space check

Optical data		Functions	
Resolution	1440 × 1080 Pixel	Number of jobs / detectors	max. 255 / max. 255
Imaging chip CMOS	1/2.9", monochrome / color	Detectors	Position tracking: X/Y and orientation; Pattern matching / Contour: teach-in and detection of patterns and contours; Calliper: distance between edges; BLOB, Grey threshold, Brightness: evaluation of brightness; Contrast: evaluation of contrast
Integrated lens, focal length [mm]	12 (medium)		
Pixel size	3.45 µm × 3.45 µm		
Focus	Motorized		
Adjustment range	25 mm to infinity		
Integrated illumination	White (5000 K), red (635 nm) ¹ , infrared (850 nm) ¹ LEDs		
Minimum field of view, X × Y	10 × 8 mm		
Target laser	Laser: red (635 nm) class 1  (IEC 60825-1)		
Electrical data		Mechanical data	
Operating voltage, +U _B	18 ... 30 DC ³	Dimensions	70,4 × 45 × 45 mm (without plug)
Current consumption (without I/O)	≤ 300 mA	Enclosure rating	IP 67 & IP 65
Protective circuits	Reverse-polarity protection, U _B / short-circuit protection of all outputs	Material, housing	Aluminium, die-cast, RoHS compliant
Power On Delay	Approx. 13 s after Power on	Material, front screen	Plastic
Outputs	PNP/NPN (switchable)	Ambient temperature: operation	0 ... +50 °C ⁴
Max. output current (per output)	50 mA, 100 mA (pin 12)	Ambient temperature: storage	-20 ... +60 °C ⁴
Switching threshold inputs incl. encoder	PNP/NPN High > U _B -1V / Low < 3V	Weight	Approx. 200 g
Input resistance	> 20 kΩ	Plug connections	Supply and I/O M12, 12-pin Ethernet M12, 4-pin
Interfaces	Ethernet (LAN), EtherNet/IP, PROFINET, SensoWeb, Service Port	Vibration resistance	EN 60068-2-6
Inputs/outputs	2 inputs, 2 outputs, 6 selectable inputs/outputs	Shock resistance	EN 60068-2-27
Encoder	✓		

¹ Not Color hardware ² Color hardware ³ Max. ripple < 5V_s ⁴ 80 % air humidity, noncondensing



- Increased depth of field
- Normal depth of field

illumination	Part number	Article number	Accessories	
White	V20-RO-A3-W-M-M2-L	632-91065	Connection cables	From Page A-38
Red	V20-RO-A3-R-M-M2-L	632-91068	Illumination	From Page A-27
Infrared	V20-RO-A3-I-M-M2-L	632-91071	Brackets	From Page A-4
White	V20C-RO-A3-W-M-M2-L	632-91075	Interface accessories	From Page A-38